ALMANACK
AND
PROGNOSTICATION,

Vel

Speculum, anno à Nativitate [illegible]

Being the second after Bissextile or Leap-Year.

Wherein is contained

The Suns ingresse in the four cardinal points.
A description of the Eclipses this Year.
The exact hour and minute of the New Moon, her full and quarters.
The daily disposition of the Weather.
Excellent Notes of Husbandry and Gardening.
The whole Fairs in *Scotland*.
A table shewing the age of the Moon every day.
A table shewing the hour and min. of full sea at *Leith*.
A most excellent table shewing the weights and measures of Mettals and Stones.
A table shewing the exact hour and min. of the Suns rising (and setting) every 5 day, and by proportion for every other day of the Year.

Exactly calculated for the Latitude of 56 deg. 40 min

By *JAMES CORSS* Philomath.

GLASGOW,
Printed By *Robert Sanders*, for the Year 1682.

To the

RIGHT HONOURABLE;

The

LORD PROVOST, BAILIES,

And Remnant venerable SENATORS of the most Ancient and Famous City of GLASGOVV.

EVery desertfull birth in any man, his Soveraign may challenge a part, his Countrey a part, his Parents a part, and his friends a part. Though I cannot be useful in every respect to each of these, yet I will strive to expresse (at least) a will, if not a perfection in ability to all. Where a general voice warrants an approbation, there every service is a duty: The truth whereof both concerns and invites me to make a particular Dedication of some serious hours to your survey, as being assured, that your Lordships are as much patronages of Vertue as patrons of Honour. For Vertues sake vouchsafe this poor testimony of my observancy, though presented at no lesse a distance then the head is from the feet, or the Center (may be supposed) from the Circumference: the altitude of my ambition aiming no higher, then that your Lordships would honour me with the title of being

Your Lordships most humble servant,

JAMES GORS.

A brief Computation of Memorable things to this [illegible] of God, 1662.

	Age
The Creation of the World	[illegible]
The general Deludge	3951
Fergus the first King of *Scotland.*	2995
The death of *Alexander* the great	1985
The Christian faith was received in *Scotland*	1452
The invention of Guns	222
The invention of Printing	212
Glasgow's Colledge was builded by Bishop *Turnbul*	207
The Birth of King CHARLES the first	62
The Birth of King CHARLES the second	32
The Martyrdom of King Charles the first	24
King CHARLES was Crowned at *Scoon*	22
The great fire in *Glasgow.*	18

Common or vulgar Notes this Year, 1662.

THe Golden Number	13
The Epact	20
Dominical Letter	E
Fastens Even	[illegible]
Easter day	March 30
Ascension day	May 8
Whitsunday	May 18

Of the Eclipses happening 1662.

THere will be only two Eclipses of the Sun this present Year, 1662. One happening in *March*, the other in *September*: but no Eclipses of the Moon at all.

The first Eclipse of the Sun happens on Monday morning the 12 of *March*, about our two a clock in the morning: this Eclipse will be seen of such as sail upon the *Indian* sea, beyond the Line; about *Green-Islands*, near *New Guienna*, where it will appear totall: It may also be observed in the Islands *Sumatra* &c. &c.

The other Eclipse of the Sun happens on Tuesday the second of *September* about noon, yet will not be visible to us, in respect of the Modus Papalis. It will be a great Eclipse in *Guinea* &c. But because it will not be visible to us, I forbear to mention it further.

The ingresse of the sun into the four Cardinal points this Year 1662.

			d.	h.	m.	
The sun enters	*Aries*	March	9	18	41	Post meridiem
	Cancer	June	10	21	38	
	Libra	Septemb.	12	12	40	
	Capricorn	Decemb.	11	00	19	

The

The exact day, hour and minute of the New Moons,
Quarters: The daily disposition of the Weather,
the whole Fairs of *Scotland*. And also, excellent
notes of Husbandry and Gardening, &c.
Digested into Monethly *Observations*, for the Year, 1662.

January, hath xxxi. dayes.

Last quarter the 2 day, 30 min. past noon.
New moon the 10 day, 5 min. past 4 in the morning.
First quarter 16 day, 11 min. past 11 at night.
Full moon 24 day, 30 min. past 5 in the morning.

The i, ii, iii. day cold wind, ib, b. and bl. frost, the vii, viii, ix, x, inclining to snow, xi. and xii. windy, and tempestuous, from thence to the xix. more temperat, xx. to xxiii. rains & winds, the rest of the month seasonable.

The first Fair in the year, is S. Naughtans at the Kirk of Bothans, in Gerry, upon the 1 day. S. Mungo in Glasgow the 13 day. And at Dunkel, and Kilwinning, the 21 day.

Cut timber, take away all superfluous branches from fruit trees, drench weak and sick Cattel with Verjuce, Horses with Water, and grind Mak, sodden with a little Bran; dig Gardens.

Febuary, hath xxviii. days.

Last quarter the 1 day, 30 min. past 9 in the morning.
New moon the 8 day, 5 min. past 4 in the afternoon.
First quarter 15 day, 1 min. past 8 in the morning.
Full moon the 22 day, 37 min. past 10 at night.

The first vi. days windy, with small showrs of rain now & then, thence to the xiii. more temperat, from the viii. to

[illegal]rrvi. inclining
[illegal]rvi. frost, and the rest of
[illegal] fair weather.

[illegal] and Fairs in Murrayland, called S. Brides day, 1.
[illegal] Dunkell, Dingwall the 2 day. And at
[illegal] day, holding 3 dayes. Aschwednesdayes Fair beginneth
[illegal] even.

[illegal] Quick-sets and Roses, sow Beans and Pease and
[illegal] especially the land being cold and stiff, furnish your Gardens
[illegal] Sallads for Summer.

March hath rrri. days.

[illegal] quarter 3 day, 11 min. past 3 in the morning.
[illegal] 10 day, 10 min. past 2 in the morning.
[illegal] quarter 26 day, 4 min. past 6 in the afternoon.
[illegal] 24 day, 36 min. past 3 in the afternoon.

The first three days bad weather, iii, v, inclined to rain, vi, viii. temperat, viii. to xi. cold rains, thence to xviii. various, [illegal] xviii. to xrii. more gentle, the rest of the month warm pleasant weather.

[illegal] Monzie in Aberdene, Dumfermling, Abercherder, and S. Mar-
[illegal] the 1 day, at Petenweem 3. S. Duthos in Tain of Ross the
[illegal] Auchterauil the 10 day, S. Causnan the 11 day, S. Patrick
[illegal] and at the Kirk of Stragreith the 16 day, in S. Johnstoun
[illegal] Culter in Lanrkoun of the Mers the 20 day, Lady day in
[illegal] Benff, at Auchtermuchty the 25 day, Palmsunday at the
[illegal] Stoun, & Skyrethursday fair is upon thurs-
[illegal] Cowper of Angus: Otherwise, Monks Cowper
[illegal] (opened in Decemb.) with rank earth,
[illegal] Onions, Artichoaks, Cucumbers,
[illegal] but in cold clay ground, sow at the moneths end.

April hath rrr. days.

[illegal] 1 day, 15 min. past 4 in the afternoon.
[illegal] 41 min. past 10 at night.

First

First quarter 3 day, 4 [illegible]
Full moon 23 day, at 9 hours [illegible]

The firſt viii. days faire & temperate, ſome cold eaſt wind with miſt, thence to the xv. drizling rains, xvi. to xix. faire and pleaſant, xix. to xxiii. variable, thence to xxviii. ſeaſonable, the reſt great winds.

S. *Donald Faire at the Kirk of Aghaboe 17 day. Mark Euangeliſt. Dyſert the 23 day, Beltan day the firſt, the 26 day, a Faire at Lenox the 29 day, and in Kilreny the 30 day.*

Whiles in *March*, and whiles in *April*.

Skireſhurſday before Peſch in Glaſgow, Dumbarton, Angus, Elgin of Murray, Paſchmunday in Cowper of Fife, Old Irwing, Lowſunday after Peſch in Kilmore, and Water at the Senzie of Saint Andrews.

Yet it is good to ſow Barley, chiefly in ſtrong land, ſow Garden ſeeds and herbs towards the end of the moneth, let not labourers want natures abundance. Sow Flax and [illegible]

May, hath xxxi. days.

Laſt quarter 1 day, 1 min. paſt 3 in the morning.
New moon 7 day, 31 min. paſt 6 at night.
Firſt quarter 14 day, 36 min. paſt 7 at night.
Full moon 22 day, 42 min. paſt 11 at night.
Laſt querter 30 day, 22 min. paſt 10 in the morning.

Pleaſant weather to the x. day, ſomewhat cold, thence to the xxv. rain, from xv. to xix. [illegible] to xxv. wholſome blaſts, and to the moneths end rain & thunder in many places.

The firſt day of May, called S. Philip, a Faire in the Grange, within the Sheiffdom of Linlithgow. Holy-Croſſe day, the ſecond [illegible] in Monroſſe, Kinoder, and in Pebles the 3 day, [illegible] the 16 day, and in Sterling a Faire, 10 dayes before Whitſonday.

Whiles

Chaury of Kelso, and on the
Tuesday monday in Edinburgh
[illegible] in Fyvieland on the
Barley, for and sow sender herbs and seeds, as Marjarom,
Savory. Set your Stilitors to work, using May dew, fit
for Wheat and Rye.

June, hath xxx. days.

New moon 6 day, 18 min. past 2, in the morning.
First quarter 13 day, 27 min. before noon.
Full moon 21 day, 33 min. past noon.
Last quarter 28 day, 56 Min. past 3 in the afternoon.

First x. days pleasant showres of rain to comfort the earth & the husband-man, from the x. to the xx. high winds, thence forth inclining to rain, xxi. to xxx. very pleasant, with gentle gales of wind the remaining days.

A Fair in Kinross the first tuesday of June. A Fair in Stramiglo and Aberdour the 6 day, A weekly mercat in Forfar, beginning the 4 of June, of Neat, Sheep, Horse, And other, &c. containing till the first of July, the 10 day, a Fair in Fergandeny, S. Barnabie in Lowder and Dyfert 11 day, S. Margaret in Abernethie, Ceres in Fife 13 day, [illegible] and S. Johns day in S. Johnstoun five dayes, in Ayr four dayes, at Dunse and Ashiston 14 day, in Auchtertuil the 15 day, and at Moffat the 18 day, S. Margaret in Dumfermling, in Edinburgh the 19 day, Midsummer day in Forres, the 24 day, in Angus called S. Evingela, the 25 day, S. Peters day at Forfar the 26 day, holding 4 dayes. As also in Faukland, Brunsland, [illegible] and Kelso 26 day, in Peebles the 29 day, S. Syrus fair, the last day of this moneth. S. John Baptists day, a fair in Fraserburgh the 24 of June.

See Jilli-flowres and Rascernary; shear sheep, seeth home-spun
Towards the end of the month begin to mow grasse. July.

New moon 5 day, 7 [illegible]

First quarter 13 day, 24 [illegible]

Full moon 20 day, 43 [illegible]

Last quarter 27 day, 54 min. [illegible]

This moneth begins with [illegible] for the firſt iij. days, thence to the 10. [illegible] from the xv. to xxi. rain with [illegible] the reſt fair.

Culros the 1 day, Abernethie and Auchtermuchtie 2 day, S. [illegible] of Bute 4 day, S. Thomas 5 day, S. Fillans in Glenlyon, Merner 6 day, S. Andrew in Glaſgow the 7 day, Kilwinning [illegible] day, the 13 S. Margaret in Kilmure, 6 daies at the Kirk of [illegible] third tueſday of this moneth a fair in Stirling, the 20 day, [illegible] dalene in Lidlithow, Petcuyrcors, and Perth, 22 day, [illegible] 24 day, S. Fames in Forfar, Cowper of Fife, Lanerk, and Rowberry Kinghorn, and in Muſſelburgh, 25 day.

Gather Flowrs and Seeds in their proper hours, and [illegible] the ſhade, (but to avoid corruption) give them a little Sun-ſhine. Beware of cold. Drink little.

Auguſt, hath xxxi. days.

New moon 3 day, 7 min. 10 at night.

First quarter 11 day, 33 min. paſt 10 at night.

Full moon 19 day, 47 min. paſt 9 in the morning.

Laſt quarter 26 day, 33 min. paſt 1 in the morning.

The firſt xv. days temperat, [illegible] have pleaſant welterly wind, good for Dunbar fiſhing, & the reſt of the moneth exceeding ſeaſonable for ripening corns.

Lambmaſs day in Atturſe 3 daies long, and in Melros, Ennerthing, S. Andrews, and in Dumbarton the 1 day, Laurence [illegible] Rane, the firſt tueſday and thurſday after in Falkland, S. [illegible] Selkirk, Auchtermuchtie and in Forres 10 day, in Rane, 2 daies [illegible] fore Kilmahug, and at the burn of Campſie, Lame day in Dundee [illegible]

Barn

...Linlithgow, Kin... and Peebles the 24 day, Samarcois... 26. and 28. Johns day in S. Johnstoun the 29 day, ...Wheat and Rye, sow winter herbs in the New Moon: If ...oil be good, cut down your Oats.

September, hath xxx. days.

New moon 2 day, 12 min. before noon.
First quarter 10 day, 45 min. past 3 in the afternoon.
Full moon 18 day, 20 min. past 5 in the morning.
Last quarter 24 day, 18 min. past 10 in the morning.

The first viii. days pleasant, from the ix. to xiii. some rains, thence to xvi. fair, the rest of the month north-east winds: so many days old the Moon is on Michaelmas day, so many floods will happen that winter.

Saint Giles in Elgin 1 day, in Moffat the 2 day, in Skirlin the 4 Lauer Ladie day in Sterling, Dundee and Bamff 8 day, Rude day in Carill, Jedburgh, Dunfermling, Dumfreis, and Athelston 24 day, in Auchtertuil and Salane the 11 day. A fair at Forfar the 15 day, holding eight dayes. Matthew Apostle in Linlithgow 21 day, A fair at Leven the 27 day, S. Michael in Hadington, Leslie, Aire, S. Andrews, Crief, and Kirkubright, and at the Kirk of Forrig the 29 day; S. Jerome in Bamff the last day.

Gather the fruits of your trees, about the end of the month sow Wheat and Rye in cold strong land.

October, hath xxxi. days.

New moon the 2 day, 18 min. past 4 in the morning.
First quarter 10 day, 39 min. past 7 in the morning.
Full moon 17 day, 48 min. past 4 in the morning.
Last quarter 23 day, 33 min. past 9 at night.
New moon 31 day, 38 min. past 10 at night.

The

The firſt vi. days cold & [illegible]
thence to the xii. more temperat
xv. windy, from the xv. to xvii. ſome
with rain, and very various to its end.

The 1, 2 and 3 a fair in Salt Preſton, S. Francis in Aber[illegible]
4 day, Dioniſe in Peebles, Earlſton, Kirtinzillach, Aiton, Auchtermuchtie, Ceres in Fiſe, and in Killimuire the 9 day, Dalkeith and Tillibol 10 day, Fenduck at Dunning 13 day, in Forgendennie 15 day, S. Luke in Lawder, Kinroſs and Rugland 18 day, Marie Salomine in Sterling and Kelſo 22 day, a fair at Forfar the 24 day holding 8 days, in Linlithgow 24. in Kilrenie, and Stramiglo 25, Fowles fair in Paſſley, and Falkirk 26 day, Simon and Jude in Dyſert, Falkirk, Crekanie, and Kirkliſton 28 day, in Alloway 29 day.

November, hath xxx. days.

First quarter 8 day, 40 min. paſt 9 at night.
Full moon 15 day, 30 min. paſt 2 in the afternoon.
Laſt quarter 22 day, 45 min. paſt noon.
New moon 30 day, 27 min. paſt 5 in the afternoon.

Great winds begin this month, xi, xii, days fair weather, thence to xxiv. froſt, the reſt of the month inclining to rain.

Hallowday in Edinburgh 8 daies, in Faulkland, Dumblane, Fordyce 1 day, in Alythie 2 day, in Kilwinning 3 day, S. Leonard in Lanerk, in Forres 6 day, S. Matth. in Dumbar, Melrois, Martinskirk, Strabogie, Cowper of Fiſe, Hamilton, Culroſſe, Kilmahug 11 day, S. Clement in Dundee 13 day, Margaretmeſſe in Dunfermling 16 day, S. Machparmueh in Fane and Auchtertuil 22 day, Brumiland 23. S. Andrew in S. Johnſtoun, Peebles and Churnſide 30 day.

Kill Swine, remove trees, ſet Beans and Peaſe, uncover the Roots of your Apple-trees, and ſtand ſo till *March*.

December hath xxxi. days.

First quarter 8 day, 37 min. paſt 9 in the morning.
Full moon 15 day, 16 min. paſt 1 after midnight.

... days cold and nipping, fr. ... frost, fill, to fyl. rain or snow, thence to the end, kindly winter weather.

Saint Nicolas in Aberdene 7 day, Ladie day in Westweems 8 day, S. Duthane in Bamff, and at the Kirk of Dere 14 day, S. Cuthbert in the Grange, within the sheriffdom of Linlithgow the 17 day, S. Thomas in Glasgow the 15 day, S. Johns day in Bamff, in Forres 27 day.

Cut timber, fallow land for Barley, let a fire be thy Bath, the the Kitchin thy Aporhecaries shop, and good hot meat thy dyet; extend thy charity to the poor.

A most excellent Table shewing the Weights and Measures of all Mettals and Stones.

The common *Radius* is 1000.

Left hand Number.		Right hand Number.
13200	Gold.	120
7889	Quick-silver.	140
6798	Lead.	160
6345	Silver.	180
4958	Brasse.	200
4333	Iron.	230
4067	Tin.	250
1643	Marble.	688
1420	Ord. Freestone.	720

The use of the Table is twofold. For,

1. The Inches of the capacity of any Mettal or Stone (named) being given to find the Ounces of the weight thereof.

As the *Radius* 1000. is to the solid Inches of any Mettal or Stone (named) so is the left hand number of the said Mettal or Stone to the ounces of the weight thereof.

Example, Let there be an Iron Bullet of 8. Inches Diameter, which by solid measuring is found to contain 268 Inches and one

[illegible] part: then to find the [illegible]
the *Radius* 100 is to 268 and one [illegible] part,
hand number) to 1162 ounces, that is 72 pounds, 10 [illegible]
required.

2. The weight (in ounces) of any Metal or Stone (named) [illegible]
ing given to find the solid capacity thereof inches.

As the *Radius* 1000 is to the weight (in ounces) of metal or stone, so is the right hand number of the said Metals or stone to the solid inches of the capacity thereof.

Example. An Iron Bullet of eight Inches Diameter, weighs 1162 ounces. I say, as the *Radius* 100 to 1162 ounces, so the right hand number 230 to 268 scrè, the solid inches contained in the said Bullet, &c. I could be more ample herein, but an unthankfull generation deserves it not at my hands. Nevertheless, such ingenious Gentle-men as desires further satisfaction in the premises (or what follows) may take notice,

THat these arts and sciences following, are taught at my house (and abroad at Gentlemens houses, &c.) in the head of Robertsons Closse hard by the Ladie Yesters Church in Edinburgh.

Arithmetick in several kinds, viz *Natural*, *Astronomical*, and that admirable and more then mortal invention of *Logarithmes*, first invented by the trice Noble and Illustrious Lord, John Lord Neper, *Barron of Marchiston*, &c. in Scotland.

Horometria, or the arte of *Dyaling*, teaching how to draw all sorts of sun-dials easily and speedily, upon any place howsoever scituate, &c.

Geometrie, shewing how to take the distance of cities, towns and places: to find the hights of hills, steeples, castles, towres, to survey grounds, and measure solidities, to conduct water-pipes (for domestick services) or Mines under the earth for publick uses, with other martial Engines not mentioned, &c. *Astronomy*, shewing how to resolve all manner of Questions, and how to calculate the true place of all the Planets and fixed stars: to erect celestial schemi or figures for any time assigned, to calculate the Eclipses of the Luminaries for any time past, present, or to come.

A

... time of the Suns rising every fifth ...
... calculated for the Latitude of
56 degrees, 20 minuts.

Names of the Months	The dayes of each Moneth. 5 day	10 day	15 day	20 day	25 day	30 day.
Januarie	8 21	8 12	8 3	7 53	7 42	7 29
Februarie	7 18	7 6	6 55	6 43	6 [illegible]	
March	6 [illegible]	6 0	5 48	5 36	5 24	5 10
April	4 58	4 48	4 36	4 26	4 15	4 5
May	3 55	3 47	3 39	3 32	3 26	3 21
June	3 18	3 17	3 18	3 23	3 23	3 28
Julie	3 35	3 42	3 50	3 59	4 9	4 19
Auguſt	4 32	4 42	4 54	5 5	5 17	5 28
September	5 42	5 54	6 3	6 17	6 29	6 41
October	6 52	7 4	7 16	7 27	7 38	7 49
November	8 1	8 11	8 20	8 27	8 34	8 39
December.	8 42	8 43	8 42	8 40	8 36	8 31

The hours and minuts of Suns riſing.

The uſe of this Table is this, with the 5. 10. 15. 20. 25. or 30. day of your Month, enter this Table, finding the dayes on the top, and Month on the margent; and in the common Angle you have the exact time of Sun riſing for the ſaid day, and by the Rule of proportion for any other intermediate day.

Example, I deſire to know the exact time of the Suns riſing the 15. day of *May*: I look in the Table, and I find that the Sun riſeth 39. min. paſt 3. in the morning. In like manner the 15. day of *June* 18. min. paſt 3. in the morning. The 15. of *Julie* 50. min. paſt 3. *&c.*

If you deſire to know the time of Sun ſetting, ſubſtract the time of Sun riſing from 12 hours, the remainder will be the time Sun ſetting. A word is enough to a wiſe man.

A

readie Table shewing the Age of the Moon
throughout this Year, 1662.

The Days of the Moneth.	January	Februar.	March	April	May	June	July	August	Septemb.	October	Novemb.	Decemb.
1	21	22	21	22	23	25	25	27	29	29	1	1
2	22	23	22	23	24	26	26	28	30	30	2	2
3	23	24	23	24	25	27	27	29	1	1	3	3
4	24	25	24	25	26	28	28	1	2	2	4	4
5	25	26	25	26	27	29	29	2	3	3	5	5
6	26	27	26	27	28	30	1	3	4	4	6	6
7	27	28	27	28	29	1	2	4	5	5	7	7
8	28	29	28	29	1	2	3	5	6	6	8	8
9	29	1	29	1	2	3	4	6	7	7	9	9
10	30	2	30	2	3	4	5	7	8	8	10	10
11	1	3	1	3	4	5	6	8	9	9	11	11
12	2	4	2	4	5	6	7	9	10	10	12	12
13	3	5	3	5	6	7	8	10	11	11	13	13
14	4	6	4	6	7	8	9	11	12	12	14	14
15	5	7	5	7	8	9	10	12	13	13	15	15
16	6	8	6	8	9	10	11	13	14	14	16	16
17	7	9	7	9	10	11	12	14	15	15	17	17
18	8	10	8	10	11	12	13	15	16	16	18	18
19	9	11	9	11	12	13	14	16	17	17	19	19
20	10	12	10	12	13	14	15	17	18	18	20	20
21	11	13	11	13	14	15	16	18	19	19	21	21
22	12	14	12	14	15	16	17	19	20	20	22	22
23	13	15	13	15	16	17	18	20	21	21	23	23
24	14	16	14	16	17	18	19	21	22	22	24	24
25	15	17	15	17	18	19	20	22	23	23	25	25
26	16	18	16	18	19	20	21	23	24	24	26	26
27	17	19	17	19	20	21	22	24	25	25	27	27
28	18	20	18	20	21	22	23	25	26	26	28	28
29	19		19	21	22	23	24	26	27	27	29	29
30	20		20	22	23	24	25	27	28	28	30	30
31	21		21		24		26	28		29		

The daily Age of the Moon this Year, 1662.

Moons Age.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Time of Tides at Leith &c.	h. 2	3	4	5	5	6	7	8	9	9	10	11	12	1	M.
	m. 44	32	20	8	56	44	32	20	8	56	44	32	20	8	56

The use of the preceeding Table is this: First, Know the day of the Moneth, which you shall seek for on the other side, and over against the day found under the respective Month (in the common Angle) you shal find the age of the Moon, ——— With which age of the Moon, if you enter this small Table above, you shall (by inspection only) know the hour and minut of full Sea (or high Water) at *Leith*, &c. Example, the first day of *Januarie*, I find the age of the Moon 21. with which I enter the little Table, and I find the same age of the Moon 21. and under that 6. 44. *viz.* 6. hours, 44. minuts, intimating, that at 6. hours 44. minuts past, it will be full Sea, or high Water at *Leith*, &c. That is to say, in the morning or afternoon; for you must know that every 12 hours it is high Water at Leith; Asalso, that everie Tide alters 24 min. of time, so that the afternoons Tide is 24. min. latter then the morning Tide.

FINIS.